

## **ATTACHMENT A**

### **BORING LOGS AND WELL CONSTRUCTION LOGS**

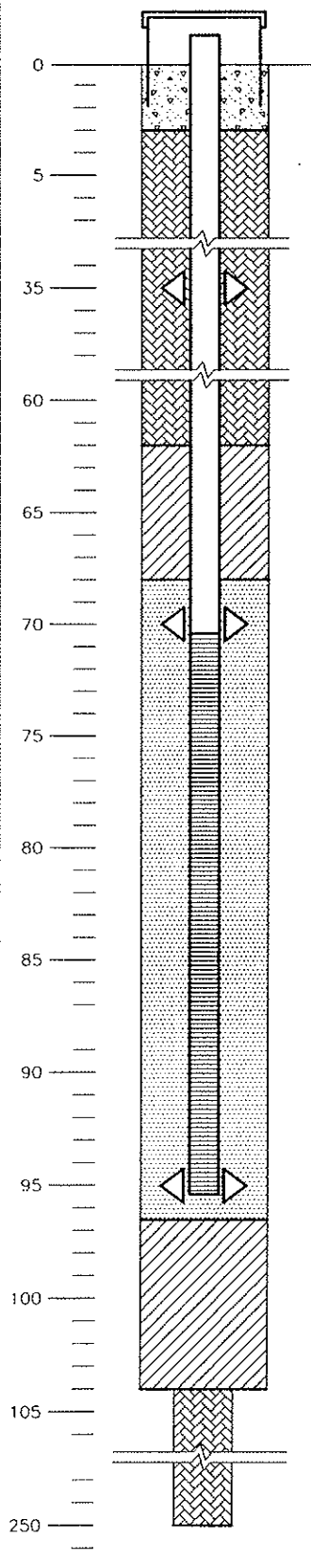
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: GLA-2

PAGE: 1 OF 1

JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: 377.33  
 ELEVATION TOP OF CASING: 379.39  
 DATE STARTED: 6/25/04  
 DATE FINISHED: 6/28/04  
 TOTAL DEPTH: 95.38 feet



## DRILLING SUMMARY:


Total Depth: Reamed to 104 feet  
 Borehole diameter: 8-1/2"  
 Driller: WDC EXPLORATION AND WELLS


Rig: SPEED STAR 30K  
 Bit(s): TRI-CONE


Drilling Fluid: AIR

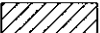
Protective Casing: 9-5/8" diameter steel  
 conductor from 0 to 20'


## WELL CONSTRUCTION DETAILS:

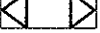
 Casing: 4" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +2.06 to 70.38 feet.)

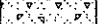
 Screen: 4" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 70.38 to 95.38 feet.)

 Filter Pack: #3 Monterey type sand.  
 (From 68 to 96.5 feet.)

 Bentonite Seal: Medium chipped bentonite.  
 (From 62 to 68 feet and  
 from 96.5 to 104 feet.)

 Grout Seal: Neat cement slurry with 5%  
 bentonite.  
 (From 3 to 62 feet and  
 from 104 to 250 feet.)

 Centralizer: Stainless steel.  
 (At 35, 70 and 95 feet.)

 Cement: From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Start		Finish	
	Date	Time	Date	Time
Drilling:	11/18/96	11:20	11/19/96	8:19
Coring:	-	-	-	-
Geophys. Logging:	12/12/96	-	12/12/96	-
Bottom Seal Placement: (Grout/Bentonite)	6/24/04	14:00	6/28/04	10:41
Ream:	6/25/04	15:00	6/28/04	9:00
Casing Install:	6/28/04	10:28	6/28/04	10:55
Filter Placement:	6/28/04	10:41	6/28/04	10:23
Seal Placement: (Bentonite)	6/28/04	11:03	6/28/04	11:08
Seal Placement: (Grout)	6/28/04	12:20	6/28/04	13:00

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	7/06/04	11:44	11:58
Bailing	7/06/04	12:00	12:07
Pumping			

Total Gallons Removed: 10

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. (µS/cm)	Temp (°F)

## Comments:

Well was developed by surging and bailing  
 until dry.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL (feet)	By
7/26/04	7:30	20 days after well development	-	76.58	300.75	WBL

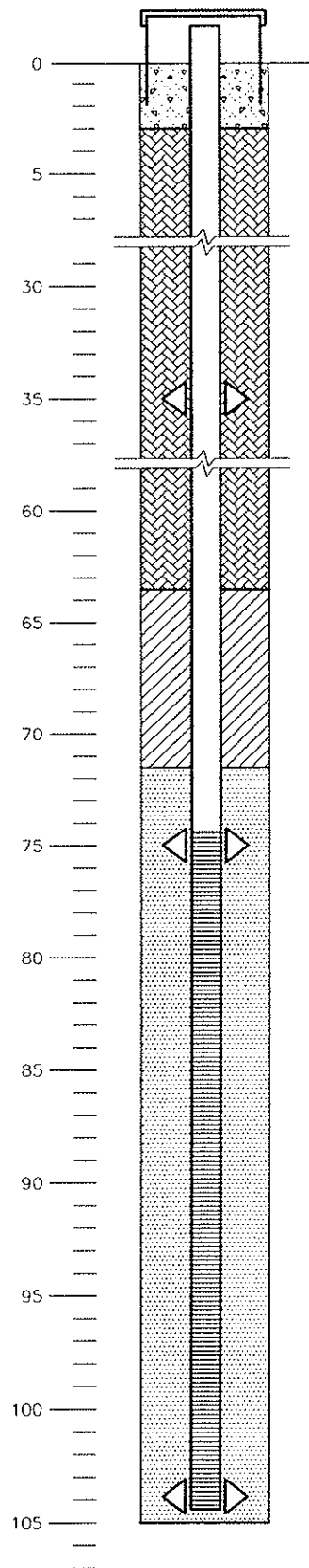
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: GLA-A

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JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: 377.49  
 ELEVATION TOP OF CASING: 380.35  
 DATE STARTED: 7/20/04  
 DATE FINISHED: 7/21/04  
 TOTAL DEPTH: 104.4 feet



## DRILLING SUMMARY:

Total Depth: 105 feet  
 Borehole diameter: 8-1/2"  
 Driller: WDC EXPLORATION AND WELLS

Rig: SPEED STAR 30K  
 Bit(s): TRI-CONE / DOWNHOLE HAMMER

Drilling Fluid: AIR

Protective Casing: 9-5/8" diameter steel  
 conductor from 0 to 20'

## WELL CONSTRUCTION DETAILS:

Casing: 4" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +2.86 to 74.4 feet.)

Screen: 4" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 74.4 to 104.4 feet.)

Filter Pack: #3 Monterey type sand.  
 (From 71.5 to 105 feet.)

Bentonite Seal: Medium chipped bentonite.  
 (From 63.5 to 71.5 feet.)

Grout Seal: Neat cement slurry with 5%  
 bentonite.  
 (From 3 to 63.5 feet.)

Centralizer: Stainless steel.  
 (At 35, 75 and 104 feet.)

Cement: From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Date	Finish Time
Drilling:	6/08/04	16:50	6/09/04	9:55
Coring:	-	-	-	-
Ream:	-	-	-	-
Geophys. Logging:	6/11/04	7:30	6/11/04	9:15
Casing Install:	6/24/04	10:00	6/24/04	10:10
Filter Placement:	6/24/04	10:15	6/24/04	11:10
Seal Placement: (Bentonite)	6/24/04	11:10	6/24/04	11:20
Seal Placement: (Grout)	6/24/04	12:30	6/24/04	13:10

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	7/06/04	8:30	8:40
Bailing	7/06/04	8:40	9:00
Pumping	7/06/04	10:25	11:15

Total Gallons Removed: 165

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. (µs/cm)	Temp (°F)

## Comments:

Well was developed by surging, bailing and pumping water until visibly clear, approximately less than 5 NTU.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL (feet)	By
6/11/04	7:15	Prior to well construction	-	75.22	302.27	WBL
7/06/04	8:25	Prior to well development	-	75.30	302.19	WBL

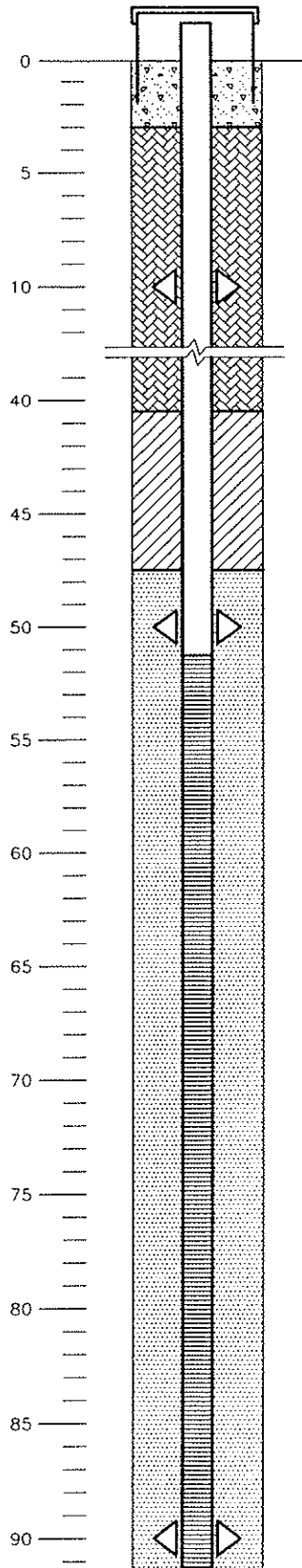
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: GLA-B

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JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: J. HOWER, CEG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: 344.14  
 ELEVATION TOP OF CASING: 347.04  
 DATE STARTED: 6/09/04  
 DATE FINISHED: 6/23/04  
 TOTAL DEPTH: 91.22 feet



## DRILLING SUMMARY:


Total Depth: 91.5 feet  
 Borehole diameter: 8-1/2"  
 Driller: WDC EXPLORATION AND WELLS


Rig: SPEED STAR 30K  
 Bit(s): TRI-CONE / DOWNHOLE HAMMER


Drilling Fluid: AIR

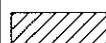
Protective Casing: 9-5/8" diameter steel  
 conductor from 0 to 20'


## WELL CONSTRUCTION DETAILS:

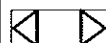
 Casing: 4" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +2.9 to 51.22 feet.)

 Screen: 4" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 51.22 to 91.22 feet.)

 Filter Pack: #3 Monterey type sand.  
 (From 47.5 to 91.5 feet.)

 Bentonite Seal: Medium chipped bentonite.  
 Seal: (From 40.5 to 47.5 feet.)

 Grout Seal: Neat cement slurry with 5%  
 bentonite.  
 (From 3 to 47 feet.)

 Centralizer: Stainless steel.  
 (At 10, 50 and 90 feet.)

 Concrete From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Date	Finish Time
Drilling:	6/09/04	15:57	6/10/04	10:49
Coring:	-	-	-	-
Ream:	-	-	-	-
Geophys. Logging:	6/11/04	9:30	6/11/04	11:15
Casing Install:	6/21/04	10:20	6/21/04	10:50
Filter Placement:	6/21/04	10:52	6/21/04	11:15
Seal Placement: (Bentonite)	6/21/04	11:27	6/21/04	11:38
Seal Placement: (Grout)	6/23/04	8:30	6/23/04	9:45

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block			
Bailing			
Pumping	6/28/04 6/29/04	15:00	16:00
Total Gallons Removed: 2400			

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. (µs/cm)	Temp (°F)

## Comments:

Well was developed during pump test  
 conducted on 6/28/04 and 6/29/04.  
 Discharge visibly clear, less than 5 NTU.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL (feet)	By
6/11/04	8:19	Prior to well construction	-	39.70	304.44	AF
7/06/04	14:30	After well development	-	40.00	304.14	WBL

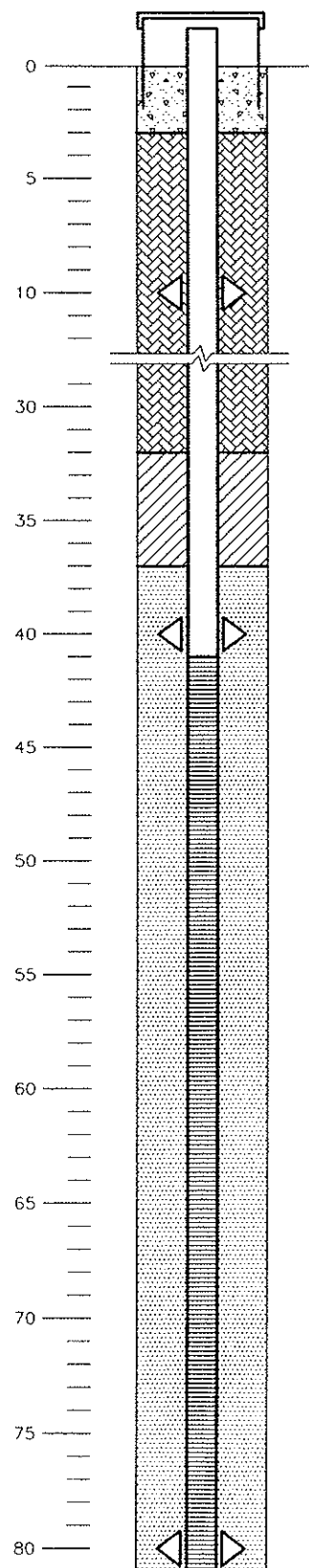
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: GLA-C

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JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: 340.76  
 ELEVATION TOP OF CASING: 343.45  
 DATE STARTED: 6/03/04  
 DATE FINISHED: 6/03/04  
 TOTAL DEPTH: 81 feet



## DRILLING SUMMARY:


Total Depth: 81 feet  
 Borehole diameter: 8-1/2"  
 Driller: WDC EXPLORATION AND WELLS


Rig: SPEED STAR 30K  
 Bit(s): TRI-CONE / DOWNHOLE HAMMER


Drilling Fluid: AIR


Protective Casing: 9-5/8" diameter steel  
 conductor from 0 to 20'


## WELL CONSTRUCTION DETAILS:


 Casing: 4" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +2.69 to 41 feet.)

 Screen: 4" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 41 to 81 feet.)

 Filter Pack: #3 Monterey type sand.  
 (From 37 to 81 feet.)

 Bentonite Seal: Medium chipped bentonite.  
 (From 32 to 37 feet.)

 Grout Seal: Neat cement slurry with 5%  
 bentonite.  
 (From 3 to 32 feet.)

 Centralizer: Stainless steel.  
 (At 10, 40 and 80 feet.)

 Concrete From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Date	Finish Time
Drilling:	6/10/04	16:35	6/11/04	9:19
Coring:	-	-	-	-
Ream:	-	-	-	-
Geophys. Logging:	6/18/04	7:30	6/18/04	9:00
Casing Install:	6/21/04	13:05	6/21/04	13:35
Filter Placement:	6/21/04	13:35	6/21/04	14:05
Seal Placement: (Bentonite)	6/21/04	14:08	6/21/04	14:23
Seal Placement: (Grout)	6/23/04	10:15	6/23/04	11:30

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	7/06/04	14:15	14:28
Bailing	7/06/04	14:28	14:38
Pumping	7/06/04	14:50	PM

Total Gallons Removed: 170

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. (µs/cm)	Temp (°F)

## Comments:

Well was developed by surging, bailing and pumping water until visibly clear, approximately less than 5 NTU.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL (feet)	By
6/12/04	15:55	Prior to well construction	-	40.14	303.31	WBL
7/06/04	14:10	Prior to well development	-	37.12	306.33	WBL

## MONITORING WELL COMPLETION SUMMARY

WELL NO.: GLA-D

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JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: 364.77  
 ELEVATION TOP OF CASING: 367.65  
 DATE STARTED: 6/07/04  
 DATE FINISHED: 6/25/04  
 TOTAL DEPTH: 145.1 feet

## DRILLING SUMMARY:


Total Depth: 146.2 feet  
 Borehole diameter: 8-1/2"  
 Driller: WDC EXPLORATION AND WELLS

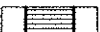
Rig: SPEED STAR 30K  
 Bit(s): TRI-CONE / DOWNHOLE HAMMER

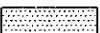
Drilling Fluid: AIR


Protective Casing: 9-5/8" diameter steel  
 conductor from 0 to 20'


## WELL CONSTRUCTION DETAILS:


 Casing: 4" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +2.88 to 95.1 feet.)

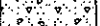
 Screen: 4" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 95.1 to 145.1 feet.)

 Filter Pack: #3 Monterey type sand.  
 (From 90.5 to 146.2 feet.)

 Bentonite Seal: Medium chipped bentonite.  
 Seal: (From 82 to 90.5 feet.)

 Grout Seal: Neat cement slurry with 5%  
 bentonite.  
 (From 3 to 82 feet.)

 Centralizer: Stainless steel.  
 (At 45, 95 and 145 feet.)

 Cement: From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Date	Finish Time
Drilling:	6/07/04	14:25	6/08/04	8:55
Coring:	-	-	-	-
Ream:	-	-	-	-
Geophys. Logging:	6/11/04	13:15	6/11/04	15:15
Casing Install:	6/25/04	7:30	6/25/04	7:45
Filter Placement:	6/25/04	8:10	6/25/04	8:45
Seal Placement: (Bentonite)	6/25/04	8:45	6/25/04	8:54
Seal Placement: (Grout)	6/25/04	10:30	6/25/04	11:10

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	7/06/04	13:15	13:25
Bailing	7/06/04	13:25	13:50
Pumping			

Total Gallons Removed: 90

## STABILIZATION TEST DATA:

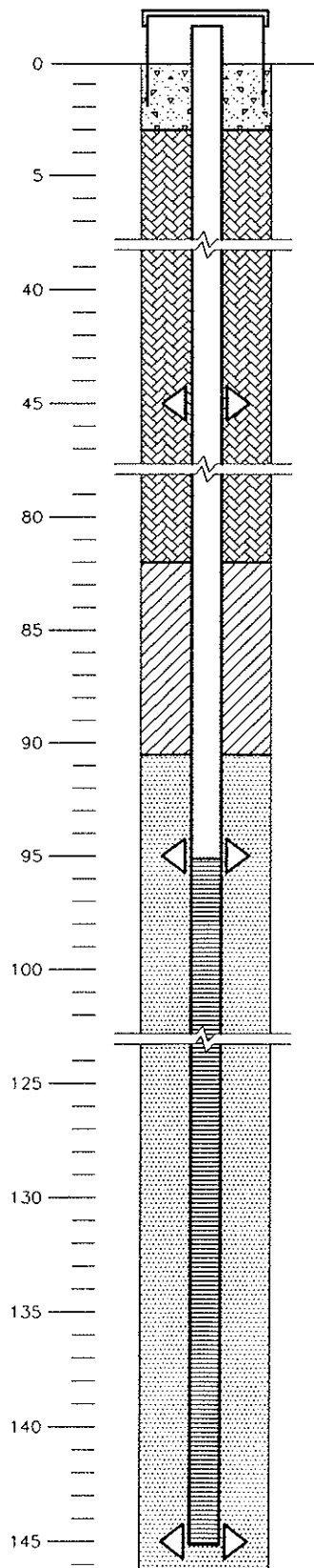
Gallons	pH	Spec. Cond. (µs/cm)	Temp (°F)

## Comments:

Well was developed by surging and bailing  
 until dry.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL (feet)	By
6/21/04	11:30	Prior to well construction	-	59.50	305.27	WBL
7/06/04	12:15	Prior to well development	-	60.27	304.50	WBL



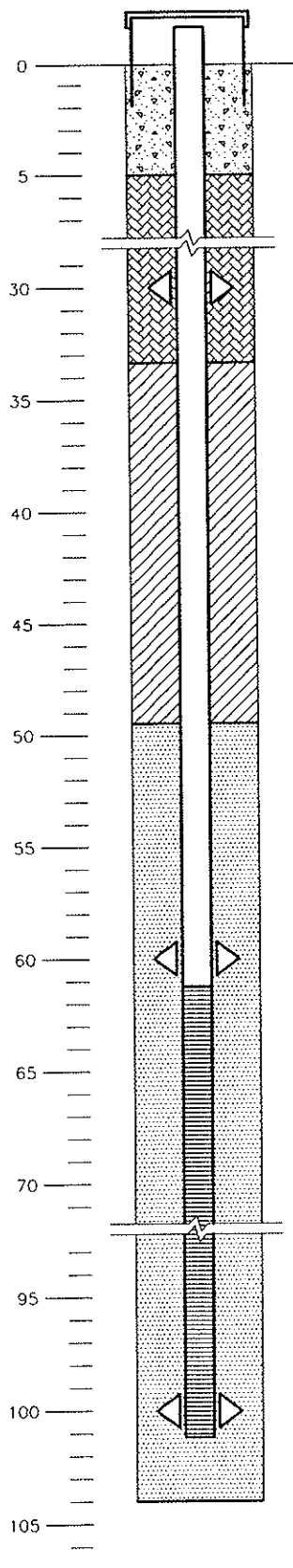
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: GLA-G

PAGE: 1 OF 1

JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: 345.04  
 ELEVATION TOP OF CASING: 347.58  
 DATE STARTED: 7/20/04  
 DATE FINISHED: 7/21/04  
 TOTAL DEPTH: 101.15 feet



## DRILLING SUMMARY:

Total Depth: 104 feet  
 Borehole diameter: 8-1/2"  
 Driller: WDC EXPLORATION AND WELLS

Rig: SPEED STAR 30K  
 Bit(s): TRI-CONE / DOWNHOLE HAMMER

Drilling Fluid: AIR

Protective Casing: 9-5/8" diameter steel  
 conductor from 0 to 20'

## WELL CONSTRUCTION DETAILS:

Casing: 4" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +2.54 to 61.15 feet.)

Screen: 4" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 61.15 to 101.15 feet.)

Filter Pack: #3 Monterey type sand.  
 (From 49.5 to 104 feet.)

Bentonite: Medium chipped bentonite.  
 Seal: (From 33.3 to 49.5 feet.)

Grout Seal: Neat cement slurry with 5%  
 bentonite.  
 (From 5 to 33.3 feet.)

Centralizer: Stainless steel.  
 (At 30, 60 and 100 feet.)

Cement: From 0 to 5 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Date	Finish Time
Drilling:	7/20/04	9:40	7/20/04	11:07
Coring:	-	-	-	-
Ream:	-	-	-	-
Geophys. Logging:	7/21/04	7:30	7/21/04	9:15
Casing Install:	7/21/04	10:23	7/21/04	10:45
Filter Placement:	7/21/04	10:47	7/21/04	11:42
Seal Placement: (Bentonite)	7/21/04	12:15	7/21/04	12:30
Seal Placement: (Grout)	7/21/04	15:00	7/21/04	15:30

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	7/22/04	10:15	10:25
Bailing	7/22/04	10:25	10:35
Pumping	7/22/04	11:03	17:10

Total Gallons Removed: 522

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. (µs/cm)	Temp (°F)

## Comments:

Well was developed by surging, bailing and pumping water until visibly clear, approximately less than 5 NTU.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL (feet)	By
7/22/04	10:00	Prior to well development	-	40.18	304.86	WBL

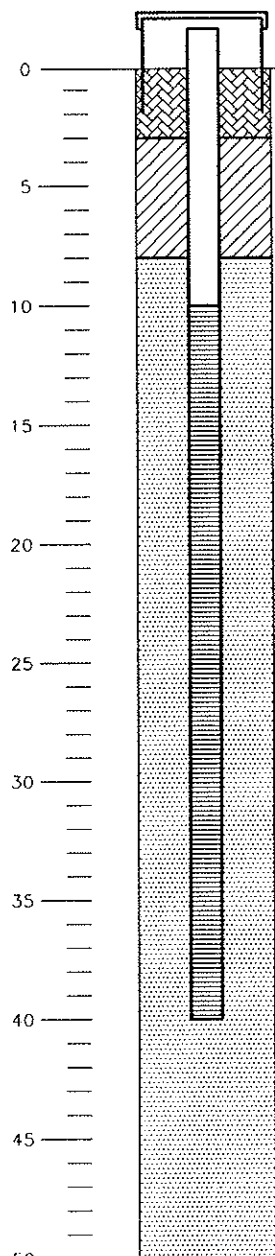
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: LUCIO-2R

PAGE: 1 OF 1

JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: ND  
 ELEVATION TOP OF CASING: ND  
 DATE STARTED: 6/03/04  
 DATE FINISHED: 6/03/04  
 TOTAL DEPTH: 40 feet




## DRILLING SUMMARY:


Total Depth: 50 feet  
 Borehole diameter: 8"  
 Driller: WDC EXPLORATION AND WELLS


Rig: CME-95  
 Bit(s): BLADE BIT


Drilling Fluid: NA  
 Protective Casing: AUGER

## WELL CONSTRUCTION DETAILS:

 Casing: 2" diameter, flush threaded,  
 Sch. 40 PVC.  
 (From +3 to 10 feet.)

 Screen: 2" diameter, flush threaded,  
 Sch. 40 PVC with 0.020" slots.  
 (From 10 to 40 feet.)

 Filter Pack: #3 Monterey type sand.  
 (From 8 to 50 feet.)

 Bentonite Medium chipped bentonite.  
 Seal: (From 3 to 8 feet.)

 Concrete Seal: From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Finish Date	Finish Time
Drilling:	6/03/04	8:33	6/03/04	9:03
Coring:	-	-	-	-
Ream:	-	-	-	-
Casing Install:	6/03/04	9:08	6/03/04	9:10
Filter Placement:	6/03/04	9:10	6/03/04	10:03
Seal Placement: (Bentonite)	6/03/04	10:03	6/03/04	10:05
Seal Placement: (Concrete)	6/03/04	10:20	6/03/04	10:45

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	6/08/04	10:00	10:10
Bailing	6/08/04	10:15	10:20
Pumping	6/08/04	10:30	11:00

Total Gallons Removed: 155

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. ( $\mu\text{S}/\text{cm}$ )	Temp ( $^{\circ}\text{F}$ )

## Comments:

Well was developed by surging, bailing and pumping water until visibly clear, approximately less than 5 NTU.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL	By
6/03/04	9:10	During well construction	-	12.5	-	WBL
6/08/04	9:30	Prior to well development	-	12.7	-	WBL
6/08/04	11:00	After well development	-	12.7	-	WBL



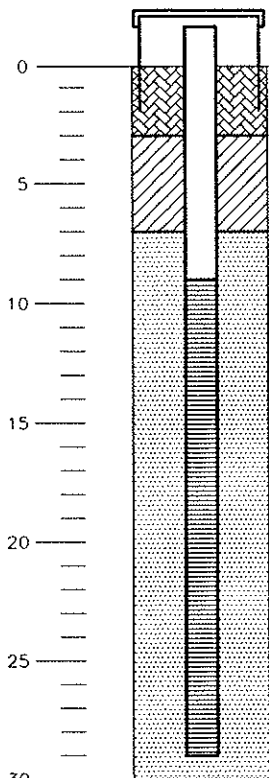
## MONITORING WELL COMPLETION SUMMARY

WELL NO.: SLRMWD-34R

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JOB NO.: 9539  
 PROJECT: GREGORY CANYON LANDFILL  
 LOCATION: GREGORY CANYON, PALA, CA  
 INSPECTOR: W. LOPEZ, CHG  
 CHECKED BY: W. LOPEZ, CHG

ELEVATION GROUND LEVEL: ND  
 ELEVATION TOP OF CASING: ND  
 DATE STARTED: 6/03/04  
 DATE FINISHED: 6/03/04  
 TOTAL DEPTH: 29 feet






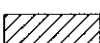

## DRILLING SUMMARY:

Total Depth: 30 feet  
 Borehole diameter: 8"  
 Driller: WDC EXPLORATION AND WELLS

Rig: CME-95  
 Bit(s): BLADE BIT

Drilling Fluid: NA  
 Protective Casing: AUGER

## WELL CONSTRUCTION DETAILS:

-  Casing: 2" diameter, flush threaded, Sch. 40 PVC. (From +3 to 9 feet.)
-  Screen: 2" diameter, flush threaded, Sch. 40 PVC with 0.020" slots. (From 9 to 29 feet.)
-  Filter Pack: #3 Monterey type sand. (From 7 to 30 feet.)
-  Bentonite Seal: Medium chipped bentonite. (From 3 to 7 feet.)
-  Cement Seal: From 0 to 3 feet.

## WELL CONSTRUCTION LOG:

	Date	Start Time	Date	Finish Time
Drilling:	6/03/04	12:20	6/03/04	12:40
Coring:	-	-	-	-
Ream:	-	-	-	-
Casing Install:	6/03/04	12:42	6/03/04	12:45
Filter Placement:	6/03/04	12:45	6/03/04	13:08
Seal Placement: (Bentonite)	6/03/04	13:08	6/03/04	13:10
Seal Placement: (Cement)	6/03/04	13:15	6/03/04	13:45

## WELL DEVELOPMENT LOG:

	Date	Start Time	Finish Time
Surge Block	6/08/04	11:45	11:55
Bailing	6/08/04	12:00	12:05
Pumping	6/08/04	12:15	12:45

Total Gallons Removed: 155

## STABILIZATION TEST DATA:

Gallons	pH	Spec. Cond. ( $\mu\text{S}/\text{cm}$ )	Temp ( $^{\circ}\text{F}$ )

## Comments:

Well was developed by surging, bailing and pumping water until visibly clear, approximately less than 5 NTU.

## WELL MONITORING DATA:

Date	Time	Description	Corr.	Depth (feet)	SWL	By
6/03/04	14:00	After well construction	-	12.6	-	WBL
6/08/04	11:25	Prior to well development	-	13.4	-	WBL
6/08/04	13:00	After well development	-	13.4	-	WBL

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-17

PAGE: 1 OF 5

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/16/04  
 DATE FINISHED: 6/18/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: NA  
 TOTAL DEPTH: 500 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USGS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:48						0				WEATHERED BEDROCK: Gray to dark gray (N4-N5), fine, highly weathered, poorly indurated TONALITE. ...(5') - intermittent apolite dikes.	Damp.
8:55						10				...(10') - highly to moderately weathered, moderately indurated.	...(10') - set conductor casing to 10 feet.
9:24						15				...(15'-18') - light yellowish brown (10YR 6/4) GRANODIORITE dike with fine to coarse euhedral crystals.	Damp.
9:31						20				...(22'-23') - brown (7.5YR 5/2), fine to medium GRANODIORITE dike.	Damp.
9:36						30				...(33') - fine to medium with some iron-oxide staining.	
9:47						40					
9:53						50				BEDROCK: Very dark gray (N3), aphanitic to fine, slightly to moderately weathered, well indurated TONALITE with some iron-oxide staining.	...(50') - inject water for dust control.
10:06						60					
10:16						70				...(69') - color change to dark grayish brown (2.5Y 4/2).	
10:24						80					
10:31						90					
10:41						100				...(96') - quartz vein.	
10:50											

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-17

PAGE: 2 OF 5

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/16/04  
 DATE FINISHED: 6/18/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: NA  
 TOTAL DEPTH: 500 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
10:50						100					
						110					
11:09						120				...(119') - fine to medium with some iron-oxide staining, slightly weathered.	
11:17						130				...(125') - color change to pale olive (5Y 6/3); fine to coarse, moderately weathered, some iron-oxide staining.	
11:30						140				...(134') - color change to olive gray (5Y 5/2); thin apalite dike.	
11:35						150				...(150') - fine-grained.	
11:51						160					
12:18						170				...(166') - calcite veins.	
						180				...(170'-173') - pale brown (10YR 6/3) to brown (10YR 5/3), fine to coarse GRANODIORITE dike with some iron-oxide staining.	
12:36						190				...(173') - dark gray (N4) to black (N2.5), aphanitic to fine, very well indurated TONALITE with thin calcite veins.	
12:42						200					...(192'-196') - no cuttings return.
13:13										...(196') - predominately fine euhedral crystals.	
13:20											

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-17

PAGE: 3 OF 5

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/16/04  
 DATE FINISHED: 6/18/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: NA  
 TOTAL DEPTH: 500 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
13:20						200				...same as above.	
						210					
13:53						220					
14:00						230					
						240					
14:34						250					
14:39						260					
						270					
15:13						280					
15:19						290				...(290-300') - predominately ophanitic.	
15:15						300				...(300') - dark gray to gray (N4-N5), fine to medium, very well indurated TONALITE.	
6/17 7:15											
7:50											
7:54											

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-17

PAGE: 4 OF 5

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/16/04  
 DATE FINISHED: 6/18/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: NA  
 TOTAL DEPTH: 500 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
7:54						300				...(300') - dark gray to gray (N4-N5), fine to medium, very well indurated TONALITE.	
8:29						310					
8:34						320					
						330					
9:13						340					
9:23						350					
						360				...(360') - fine to ophanitic with calcite veins.	
9:58						370					
10:10						380					
11:01						390					
11:12						400					
11:49											
12:01											

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-17

PAGE: 5 OF 5

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/16/04  
 DATE FINISHED: 6/18/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: NA  
 TOTAL DEPTH: 500 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
12:01						400				...same as above.	
12:18						410					
6/18 7:54						420					
8:10						430					
8:14						440					
9:03						450					
9:08						460					
9:41						470					
9:48						480					
10:16						490					
10:21						500					
11:00										Notes: 1. Total depth of boring 500 feet. 2. No groundwater encountered. 3. Borehole geophysics conducted on 6/21/04. 4. Boring abandoned with neat cement grout on 6/22/04.	

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-3S

PAGE: 1 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/14/04  
 DATE FINISHED: 6/15/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 24.37 feet  
 TOTAL DEPTH: 80 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USGS GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:40						0			SW	YOUNGER ALLUVIUM: Dark brown (10YR 2/2) GRAVELLY SAND with COBBLES and BOULDERS. SAND is fine to medium, well graded; GRAVEL and COBBLES well rounded.	Moist.
						5				...(6') - color change to brown (7.5YR 5/4).	
8:48						10					
6/15						12				...(12') - BOULDER.	Refusal on boulder, switch to Stratex.
8:33						14				...(14') - SAND is fine to coarse with volcanic COBBLES.	
						17				...(17') - increasing GRAVEL, COBBLES, and BOULDERS.	
						20					
						25			SM	OLDER ALLUVIUM: Light brown (7.5YR 6/4) SILTY SAND with scattered GRAVEL. SAND is fine to coarse, well graded.	Moist.
						26				...(26') - color change to yellow-brown (7.5YR 4/4).	Very moist
8:52						30					
						31				...(31') - increasing GRAVEL and COBBLES cemented with silica, well indurated.	Moist.
						35					
						40				WEATHERED BEDROCK: Olive (5Y 5/4), highly weathered with iron-oxide staining and alteration of feldspars to CLAY, medium to coarse GRANODIORITE (GRUSS).	Very moist.
						41				...(41') - color change dark brown (10YR 3/3).	...(37') - set conductor casing.
						44				...(44'-47') - apolite dike, fine to coarse, well indurated.	...(44') - damp.
9:40						47				...(47') - moderately weathered.	
9:54						49				...(49') - iron-oxide staining on fractured surfaces.	
10:00						51				...(51') - apolite vein.	...(52') - wet.
13:29											

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-3S

PAGE: 2 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/14/04  
 DATE FINISHED: 6/15/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 24.37 feet  
 TOTAL DEPTH: 80 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
10:00						50				...(51') - opolite vein.	...(52') - wet.
13:29											
13:31											
13:36						55					
13:42										...(58') - increasing mafic minerals.	Saturated.
13:48						60					
						65					
						70					
						75					
14:00						80				Notes:	
						85				1. Total depth of boring 80.0 feet; borehole open to 77.5 feet.	
						90				2. Groundwater first encountered at 52.0 feet on 6/15/04; static water level measured at 24.37 feet on 6/17/04.	
						95				3. Borehole geophysics performed on 6/18/04.	
						100				4. Borehole abandoned with neat cement grout on 6/23/04.	

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-A

PAGE: 1 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/08/04  
 DATE FINISHED: 6/09/04  
 ELEVATION: 429575.97  
 NORTHING: 1737085.44  
 EASTING: 377.49

GW DEPTH: 75.12 feet  
 TOTAL DEPTH: 105 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USGS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
16:50						0			SM	SOIL: Strong brown (7.5YR 4/6), fine, poorly graded SILTY SAND.	Dry.
						5					
						10				WEATHERED BEDROCK: Olive brown (2.5Y 4/3), fine, highly weathered with iron-oxide staining, poorly indurated TONALITE (GRUSS).	Slightly moist.
						15					
17:00						20				...(18') - color change to dark gray (2.5Y 4/1); moderately to slightly weathered, moderately indurated.	...(16') - set conductor casing, switch to downhole hammer.
6/07 7:15						25				BEDROCK: Black (N2.5), fine to medium, hornblend rich with quartz, moderately indurated TONALITE.	Dry.
7:22						30					
7:32						35					
						40					
						45				...(30') - color varies from black (N2.5) to dark gray (2.5Y 4/1).	Dry.
7:55						50					
8:23						55					
						60					

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-A

PAGE: 2 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/08/04  
 DATE FINISHED: 6/09/04  
 ELEVATION: 429575.97  
 NORTHING: 1737085.44  
 EASTING: 377.49

GW DEPTH: 75.12 feet  
 TOTAL DEPTH: 105 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:42						60				...some as above.	
8:56						65					
						70					
						75					
						80					
9:13						85				...(83'-95') - color predominately dark gray (2.5Y 4/1); increasing quartz and feldspar.	Cuttings moist.
9:30						90					...(85') - first water encountered.
						95					
						100					
9:55						105				Notes:	
						110				1. Total depth of boring 105 feet.	
						115				2. Groundwater first encountered at 85 feet, static water level measured at 75.12 feet on 6/11/04.	
						120				3. Borehole geophysics conducted on 6/11/04.	
										4. Monitoring well constructed in boring (see well completion summary).	

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-B

PAGE: 1 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG/A. FYODOROVA

DATE STARTED: 6/09/04  
 DATE FINISHED: 6/10/04  
 ELEVATION: 430149.38  
 NORTHING: 1737940.66  
 EASTING: 344.14

GW DEPTH: 40.66 feet  
 TOTAL DEPTH: 91.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
15:57						0			SM	COLLUVIUM: Dark yellowish brown (10YR 4/4), fine, poorly graded SILTY SAND.	Slightly moist.
16:00						5					
16:25						10				...(10') - grain size increase to fine to coarse with fine GRAVEL; well graded.	Moist.
16:37						15				WEATHERED BEDROCK: Light olive brown (2.5Y 5/4), fine, highly weathered with iron-oxide staining and alteration of feldspars to CLAY, poorly induroted GRANODIORITE (GRUSS).	Moist.
6/10 8:11						20				...(22-25') - color change to strong brown (7.5YR 5/6); grain size increase to fine to coarse.	
8:14						25					
8:26						30					... (26') - set conductor casing.
8:28						35					
8:35						40				...(35') - color change to olive brown (2.5Y 4/3).	Very moist.
8:41						45					...(42') - sound for water, wet at bottom of boring.
9:21						50					...(52'-60') - very moist.

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-B

PAGE: 2 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG/A. FYODOROVA

DATE STARTED: 6/09/04  
 DATE FINISHED: 6/10/04  
 ELEVATION: 430149.38  
 NORTHING: 1737940.66  
 EASTING: 344.14

GW DEPTH: 40.66 feet  
 TOTAL DEPTH: 91.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:30						50					...(52'-60') - very moist.
10:12						55					
						60				...(60') - medium to coarse.	
						65				...(65') - fine to medium.	...(62') - sound for water, water measured at 57.75 feet.
						70				...(71') - fine, moderately weathered.	
						75				...(76') - fine to coarse.	Moist.
10:22						80					...(80') - free water.
10:27						85					
10:49						90				UNWEATHERED BEDROCK: Gray (N5-N6), medium to coarse, very well indurated GRANODIORITE/TONALITE with euhedral crystals.	
						95				Notes: 1. Total depth of boring 91.5 feet (refusal with tri-cone bit). 2. Groundwater first encountered at 42 feet on 6/10/04; static water level measured at 40.66 feet on 6/11/04. 3. Borehole geophysics conducted on 6/11/04. 4. Groundwater monitoring well constructed in boring (see well completion summary).	
						100					

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-C

PAGE: 1 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/10/04  
 DATE FINISHED: 6/11/04  
 ELEVATION: 430101.73  
 NORTHING: 1737809.29  
 EASTING: 340.76

GW DEPTH: 40.14 feet  
 TOTAL DEPTH: 81 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
14:35						0			SM	TOPSOIL: Brown (7.5YR 4/3), fine to coarse, well graded SILTY SAND.	Dry.
						5			SM	COLLUVIUM: Strong brown (7.5YR 5/6), fine to medium, moderately graded SILTY SAND. ...(6') - well indurated.	Damp.
						10				...(10') - GRAVEL and COBBLES predominately opalite and metavolcanics.	
						15				WEATHERED BEDROCK: Strong brown (7.5YR 5/6), fine to coarse, highly weathered with alteration of feldspars to CLAY, poorly indurated GRANODIORITE (GRUSS). ...(17') - pegmatite dike. ...(18'-19') - apolite dike.	Very moist.
16:46						20				...(20') - becomes moderately weathered with slight iron-oxide staining.	
6/11 7:42						25				...(24'-25') - pegmatite dike. ...(26'-27') - diabase/mafic dike, highly weathered to CLAY.	...(26') - very moist. ...(27') - set conductor casing.
8:01						30				...(33') - color change to dark grayish brown (2.5Y 4/2).	
8:07						40					
						45					
8:14						50					...(50') - wait 30 minutes sound for water; water measured at 46.7'.
8:55											

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-C

PAGE: 2 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: A. FYODOROVA

DATE STARTED: 6/10/04  
 DATE FINISHED: 6/11/04  
 ELEVATION: 430101.73  
 NORTHING: 1737809.29  
 EASTING: 340.76

GW DEPTH: 40.14 feet  
 TOTAL DEPTH: 81 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:55						50					...(50') - wait 30 minutes sound for water; water measured at 46.7'.
						55				...(55'-56') - color change to olive brown (2.5Y 4/3).	
9:02						60					
9:08						65				...(63'-67') - no cuttings return.	
						70				...(67') - slightly to moderately weathered.	Moist.
						75				...(75') - slightly weathered.	...(72') - very moist.
9:19						80					...(77') - wet.
						85				Notes:	
						90				1. Total depth of boring 81.0 feet; borehole open to 77.5 feet.	
						95				2. Groundwater first encountered at 46.7 feet; static water level measured at 40.14 feet on 6/11/04.	
						100				3. Borehole geophysics conducted on 6/18/04.	
										4. Groundwater monitoring well constructed in boring (see well completion summary).	

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# GeoLogic Associates

## Boring Log



BORING NO.: GLA-D

PAGE: 1 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/07/04  
 DATE FINISHED: 6/08/04  
 ELEVATION: 429775.68  
 NORTHING: 1737341.82  
 EASTING: 364.77

GW DEPTH: 59.5 feet  
 TOTAL DEPTH: 146.2 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
14:25						0			SC	SOIL: Dark reddish brown (5YR 3/3), fine, poorly graded CLAYEY SAND.	Moist.
						5				WEATHERED BEDROCK: Olive brown (2.5Y 4/3) to brown (10YR 4/3), fine, highly weathered with iron-oxide staining, poorly indurated TONALITE (GRUSS) with GRANODIORITE dikes composed of quartz and feldspar phenocrysts.	Slightly moist.
14:32						10					
15:00						15				...(15') - fine to medium; increasing felsic minerals.	
15:12						20					...(18') - set conductor casing.
15:18						25				...(22') - moderately weathered with some highly weathered intervals.	
						30				BEDROCK: Brown (10YR 4/3) to black (N2.5), fine to medium, hornblend and quartz rich, moderately indurated TONALITE.	Dry.
15:30						35					
16:02						40					Switch to downhole hammer.
16:09						45					
16:15						50				...(50') - color change to black (N2.5).	
						55					
						60					...(60') - dry.

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-D

PAGE: 2 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/07/04  
 DATE FINISHED: 6/08/04  
 ELEVATION: 429775.68  
 NORTHING: 1737341.82  
 EASTING: 364.77

GW DEPTH: 59.5 feet  
 TOTAL DEPTH: 146.2 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
16:30						60				...same as above.	...(60') - dry.
16:35						65					
						70					
						75					
						80					
16:55						85					
17:05						90					
						95					
						100				...(100-110') - very well indurated.	...(98') - very moist to slightly wet cuttings.
17:50						105					
6/08 7:25						110					
						115					
						120					
											...(105.6') - first water encountered.

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-D

PAGE: 3 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/07/04  
 DATE FINISHED: 6/08/04  
 ELEVATION: 429775.68  
 NORTHING: 1737341.82  
 EASTING: 364.77

GW DEPTH: 59.5 feet  
 TOTAL DEPTH: 146.2 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USGS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:08						120				...some as above.	
8:18						125					
						130					...(130') - cuttings are damp.
						135					
						140					
8:55						145					...(142') - very moist.
						150				Notes:	
						155				1. Total depth of boring 146.2 feet.	
						160				2. Groundwater first encountered at 105.6 feet on 6/7/04, static water level measured at 59.5 feet on 6/21/04.	
						165				3. Borehole geophysics conducted on 6/11/04.	
						170				4. Monitoring well constructed in boring (see well completion summary).	
						175					
						180					

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-E

PAGE: 1 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/14/04  
 DATE FINISHED: 7/15/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 152.80 feet  
 TOTAL DEPTH: 152.85 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
16:58						0		SM	SM	SOIL: Brown (7.5YR 5/4), fine to medium, poorly graded SILTY SAND.	Dry.
						5				WEATHERED BEDROCK: Brown (7.5YR 5/4) to strong brown (7.5YR 5/6), fine to medium, moderately weathered, moderately indurated TONALITE (GRUSS) with GRANODIORITE dikes.	Dry.
						10				BEDROCK: Olive brown (2.5Y 5/4), fine to coarse, well indurated, unweathered TONALITE. ...(13') - color change to dark gray (7.5YR 4/1) to (5Y 4/1).	Dry.
17:30						15					...(16') - set conductor casing, switch to downhole hammer.
6/15						20					
8:10						25					
8:13						30					
8:25						35					...(25') - slightly moist.
						40					
8:33						45					
8:39						50					...(45') - dry.
						55					
8:49						60					
8:51											

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-E

PAGE: 2 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/14/04  
 DATE FINISHED: 7/15/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 152.80 feet  
 TOTAL DEPTH: 152.85 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:51						60				...same as above.	
8:53						65				...(65') - minor iron-oxide staining.	Dry.
9:10						70					
						75					
9:20						80				...(80') - color change to gray (N5-N6); very well indurated.	Dry.
9:27						85					
						90					
						95					
9:44						100					...(100') - dry.
9:50						105					
						110					
						115					
10:10						120					...(120') - dry.
10:28											

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-E

PAGE: 3 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/14/04  
 DATE FINISHED: 7/15/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 152.80 feet  
 TOTAL DEPTH: 152.85 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
10:28						120				...same as above.	...(120') - dry.
						125					
						130					
						135					
10:52						140					
11:03										...(142') - well indurated.	...(140') - dry.
						145					
						150					
11:15											Stop for 2 hours, sound for water, wet at bottom of boring.
						155				Notes: 1. Total depth of boring 152.85 feet. 2. Groundwater first encountered at 152.8'. 3. Borehole geophysics conducted on 7/20/04.	
						160					
						165					
						170					
						175					
						180					

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-F

PAGE: 1 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/16/04  
 DATE FINISHED: 7/16/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 164.8 feet  
 TOTAL DEPTH: 165.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
7:30						0		SM	SM	SOIL: Strong brown (7.5YR 5/6), fine to medium, poorly graded SILTY SAND.	Dry.
						5				WEATHERED BEDROCK: Dark brown (7.5YR 3/4), fine to medium, highly weathered with iron-oxide staining and alteration of feldspars to CLAY, poorly indurated TONALITE (GRUSS).	Moist.
						10				Olive brown (2.5Y 4/3), fine to medium, moderately weathered, poorly to moderately indurated TONALITE.	Moist.
						15					
						20					...(17') - set conductor casing, switch to downhole hammer. ...(20') - dry.
8:05						25					
8:13						30				BEDROCK: Gray (2.5Y 4/1), fine to medium, unweathered, well indurated TONALITE.	Dry.
						35					
						40					
8:20						45				...(45') - very well indurated.	
8:26						50					
						55					
						60					

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-F

PAGE: 2 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/16/04  
 DATE FINISHED: 7/16/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 164.8 feet  
 TOTAL DEPTH: 165.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
						60				...same as above.	
8:40						65					
8:48						70					
						75					...(75') - dry.
						80					
9:03						85					...(83') - dry.
9:09						90					
						95					
						100					
9:25						105					...(103') - dry.
9:35						110					
						115					
						120					

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-F

PAGE: 3 OF 3

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/16/04  
 DATE FINISHED: 7/16/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 164.8 feet  
 TOTAL DEPTH: 165.5 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:55						120				...same as above.	...(123') - dry.
10:02						125					
						130					
						135					
						140					
10:24						145					
10:30						150					...(146') - very moist.
						155					
						160					
10:45						165					
						170				Notes: 1. Total depth of boring 165.5 feet. 2. Groundwater first encountered at 164.8'. 3. Borehole geophysics conducted on 7/20/04.	
						175					
						180					

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: GLA-G

PAGE: 1 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/20/04  
 DATE FINISHED: 7/20/04  
 ELEVATION: 430247.55  
 NORTHING: 1737961.72  
 EASTING: 345.04

GW DEPTH: 40.18 feet  
 TOTAL DEPTH: 104 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
9:40						0			SM	COLLUVIUM: Strong brown (7.5YR 4/6), fine to coarse, well graded SILTY SAND with iron-oxide staining.	Dry.
						5					
						10				...(8') - color change to brown (7.5YR 5/4).	Moist.
						15				...(12') - color change to strong brown (7.5YR 5/6) ...(13-16') - GRANODIORITE BOULDER.	...(16') - set conductor casing.
10:13						20				WEATHERED BEDROCK: Brown (7.5YR 4/4), fine to coarse, highly weathered with iron-oxide staining and alteration of feldspars to CLAY, poorly indurated GRANODIORITE.	...(20') - switch to downhole hammer.
10:21						25				...(24') - color change to light yellowish brown (2.5Y 6/4).	
10:24						30					
10:29						35				...(35') - color change to olive brown (2.5Y 4/3) to dark grayish brown (2.5Y 4/2); moderately weathered, poorly indurated, little to no CLAY.	
						40					
10:36						45					
10:41						50					...(48') - very moist.
						55					
						60				...(60') - fine to medium.	

CONTINUED ON NEXT PAGE

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# GeoLogic Associates

## Boring Log

BORING NO.: GLA-G

PAGE: 2 OF 2

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: AIR ROTARY  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 7/20/04  
 DATE FINISHED: 7/20/04  
 ELEVATION: 430247.55  
 NORTHING: 1737961.72  
 EASTING: 345.04

GW DEPTH: 40.18 feet  
 TOTAL DEPTH: 104 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
10:46						60				...(60') - fine to medium.	
10:51						65				...(65'-70') - color change to pale yellow (2.5Y 7/4); medium to coarse.	...(65') - very moist to slightly wet.
						70				...(70') - color change to yellowish brown (10YR 5/8); fine to medium.	
						75					
						80					
10:56						85	▽			...(85') - color change to dark grayish brown (2.5Y 4/2); fine to coarse.	...(85') - first water encountered.
11:02						90					
						95					...(93') - slightly wet.
						100					
11:07						105				Notes:	
						110				1. Total depth of boring 104 feet. 2. Groundwater first encountered at 85 feet on 7/20/04; static water level measured at 40.18 feet on 7/22/04. 3. Borehole geophysics conducted on 7/20/04. 4. Groundwater monitoring well constructed on 7/21/04 (see well completion summary).	
						115					
						120					

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: LUC10-2R

PAGE: 1 OF 1

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: HOLLOW STEM AUGER  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/03/04  
 DATE FINISHED: 6/03/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 12.5 feet  
 TOTAL DEPTH: 50 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
8:33						0			SM	ALLUVIUM: Brown (10YR 4/2), fine to coarse, well graded SILTY SAND with GRAVEL. GRAVEL is subrounded to subangular.	Slightly moist.
						5					...(5') - moist.
						10					
						15					
						20			SW	Dark gray (10YR 4/1), well graded, fine to coarse SAND with fine to medium, subrounded to subangular GRAVEL.	Wet.
8:45						25					
						30					
8:54						35					
						40					...(40') - saturated.
8:58						45					
						50					
9:03						55				Notes: 1. Total depth of boring 50 feet. 2. Groundwater measured at 12.5 feet. 3. Groundwater monitoring well constructed on 6/3/04 (see well completion summary)	
						60					

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The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.

# GeoLogic Associates

## Boring Log

BORING NO.: SLMWD-34R

PAGE: 1 OF 1

JOB NO.: 9539  
 SITE LOCATION: GREGORY CANYON LANDFILL  
 DRILLING METHOD: HOLLOW STEM AUGER  
 CONTRACTOR: WDC EXPLORATION AND WELLS  
 LOGGED BY: W. LOPEZ, CHG

DATE STARTED: 6/03/04  
 DATE FINISHED: 6/03/04  
 ELEVATION: ND  
 NORTHING: ND  
 EASTING: ND

GW DEPTH: 12.6 feet  
 TOTAL DEPTH: 30 feet

TIME	DRY DENSITY (LBS/CU. FT.)	MOISTURE (%)	BLOWS (COUNT/FT.)	SAMPLE SIZE (INCHES)	SAMPLE NO.	DEPTH IN FEET	ELEVATION IN FEET	MATERIAL SYMBOL	USCS/GEOLOGIC FORMATION	DESCRIPTION	COMMENTS
12:20						0			SM	ALLUVIUM: Yellowish brown (10YR 5/4), fine, poorly graded, micaceous SILTY SAND.	Dry.
						5					...(5') - slightly moist.
						10					
						12.6				...(12') - fine to coarse with trace of fine to medium, subrounded GRAVEL.	...(14') - wet.
12:28						15					
						20					...(20') - saturated.
						25			SW	Dark gray (10YR 4/1), fine to coarse SAND with trace of subrounded GRAVEL.	
12:40						30					
						35				Notes:	
						40				1. Total depth of boring 30 feet.	
						45				2. Groundwater measured at 12.6 feet.	
						50				3. Groundwater monitoring well constructed on 6/3/04 (see well completion summary).	
						55					
						60					

CONTINUED ON NEXT PAGE

The data presented on this log is a simplification of actual conditions encountered and applies only at the location of this boring and at the time of drilling. Subsurface conditions may differ at other locations and may change with the passage of time.